

PSYC305

Agenda

- Finish methods
- Discuss hypothesis testing

Theory, Hypotheses and predictions

- Theory
 - A systematic body of ideas about a topic or phenomenon
- Hypothesis
 - Based on a theory, come up with a *testable* idea or question

Experiments

- Between subject comparison
 - Two separate groups for the control and experimental conditions
 - Ex: Group A gets a new medicine, group B gets a placebo
- Within subject comparison
 - Same subjects participate in both conditions
 - Ex: Each participant takes a memory test underwater and in a classroom

Experiment Tips

- Your experimental and control conditions should be as close as possible
 - Only difference is something that answers your question
 - Ex: ideal medical trial
 - Twins, give one drug and other placebo

Experiment Tips

- Observer-expectancy effect
 - Researcher's bias influences the participants in the study
- Double blind
 - Both experimenter and subject don't know which condition a participant is in
 - Avoids experimenter bias

Think, pair, share

- Theory: Caffeine improves cognition.
- Come up with a hypothesis and design an experiment to test your hypothesis.

Statistics (done on board)

- Sample and population
- Descriptive vs. inferential
- Frequency/proportion plots
- Descriptive statistics
 - Mean, median, mode
- Inferential statistics
 - What matters?
 - T-tests

